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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/691,088	10/18/2000	Akihiro Funakoshi	13782(JP919990178US1)	3754

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EXAMINER

AWAD, AMR A

ART UNIT

PAPER NUMBER

2675

DATE MAILED: 01/09/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/691,088

Applicant(s)

FUNAKOSHI ET AL.

Examiner

Amr Awad

Art Unit

2675

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 18 October 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. Figures 8-9 should be designated by a legend such as --Prior Art—as discussed in the specification (page 14, lines 15-19), because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endo (US patent NO. 5,852,430) in view of Sato (US patent NO. 5,956,006).

As to independent claim 1, Endo teaches a white point adjusting method for adjusting an achromatic color level to be displayed on a liquid crystal module for an input video signal including a

Plurality of color signals (abstract), comprising:

A first step of setting a white point by deciding an offset quantity of at least one color signal from a highest gray level for each color temperature (for that, Endo teaches applying effective voltages at a maximum of eight levels of the liquid crystal) (col. 9, lines 6-13);

A second step of setting an offset quantity of the color signal in a direction of converging a halftone white point for each color temperature set in the first step (col. 9, lines 23-36).

Endo does not expressly teach a third step of adjusting chromaticity on a screen of the liquid crystal module by adding the offset quantity decided in the first step and the offset quantity set in the second step to the input video signal.

However, Sato teaches a liquid crystal display apparatus, wherein an offset value is added to the offset quantity of at least one of the color (col. 11, lines 3-57).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Sato adding an offset quantity to the color signal to be applied to Endo's device so as motivated by Sato, to ensure fine adjusting of the display color (col. 2, lines 44-46).

As to claim 2, Endo teaches that input video signal is composed of R, G and B color signals (col. 8, lines 12-17), the white point setting in the first step is executed by using a prescribed color temperature (below 40 degree C) as a default value, and luminance of the R and G color signals is reduced when a color temperature is set to a

high temperature side with respect to the prescribed color temperature (col. 8, lines 19-28 and col. 9, lines 6-21).

As to claim 3, Endo teaches that in eight-color display operation can be performed by applying effective voltages at a maximum of eight levels (col. 9, lines 6-23). This teaching fairly reads on the step of adjusting luminance of the entire input video signal after a white point is set in the first step.

As to claim 4, Sato teaches that offset quantity set in the second step is calculated with accuracy of bits larger in number than bits of the input video signal (col. 11, lines 19-33).

As to independent claim 5, the limitations in claim 5 are substantially similar to the limitations of independent claim 1 and will be analyzed as previously discussed with respect to claim 1.

As to claim 6, Endo teaches a step of correcting deterioration of luminance in the display panel following the setting of a highest gray level achromatic color (for that, Endo teaches that in case of having high temperature (40 degree C or above) which cause deterioration in the colors of the display; the voltage designation signals corresponding to the image data different from the corresponding signals for low temperature (below 40 degrees C)) (col. 9, lines 6-23).

As to claim 7, as discussed above, Endo teaches that the step of setting the
adjusting value
is provided independently of a contrast adjustment executed by a driver for driving the

display panel, and the adjusting value is set on the basis of a set value when the
contrast

adjustment is carried out (for that, Endo shows that the voltage designation signals are
changed

according to the temperatures and not according to the contrast adjustment).

As to claim 8, the claim is an apparatus claim corresponding to method claims 1
and is analyzed
as previously discussed with respect to claim 1.

As to claim 9, Endo teaches that first reference table (figure 5) is constituted to
increase blue luminance in relative fashion when the color temperature is set to a high
temperature side.

As to claim 10, the wave signal shown in figure 6 of Endo's device wherein the
signals are inverted can fairly read on the citation of an inverter for adjusting a change
of luminance on the liquid crystal display module on the basis of the offset quantity set
by the first reference table (col. 10, lines 29-51).

As to claim 11, the table in figures 5 and 7 of Endo's device shows that the data
is changed to unequal intervals corresponding to the desired luminance.

As to independent claim 12, the claim is substantially similar to the other
independent claims rejected above and will be analyzed as previously discussed with
respect to independent claims 1 and 5.

As to claim 13, as can be seen above, Endo (figures 5 and 7) shows that the hue
value of the white color remains the same.

As to claims 14-15, Sato teaches that the adjusting means adjusts distribution of luminance among the R, G and B color signals by adding an offset quantity into original γ characteristic of each of the entered R, G and B color signals, and then outputs a result thereof to the driver (col. 11, lines 7-57).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Choi (US patent NO. 6,025,823) teaches a color curve control circuit based on the temperature.

Greene et al. (US patent NO. 6,271,825) teaches a correction method for brightness in electronic display.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amr Awad whose telephone number is (703) 308-8485. The examiner can normally be reached on Monday-Friday, between 9:00AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Saras can be reached on (703) 305-9720. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9314 for regular communications and (703)872-9314 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4750.

A handwritten signature in cursive script, appearing to read "Amir Ahmad Arora".

A.A

January 6, 2003